```
**************************************************************************
 __  __ _____ ____  ____   ____ _   _
|  \/  |  ___/ ___||  _ \ / ___| | | |
| |\/| | |_ | |    | |_) | |   | |_| |
| |  | |  _|| |___ |  _ <| |___|  _  |
|_|  |_|_|   \____||_| \_\\____|_| |_|  (TM)
**************************************************************************
```



MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

on: Wed Aug 20 09:42:15 1997; MasPar time 18.26 Seconds
634.466 Million cell updates/sec

Tabular output not generated.

Title: >US-08-469-637A-2
Description: (1-401) from US08469637A.pep (1 of 2)
Perfect Score: 3030
Sequence: 1 MNKLLCCALVFLDISIKWTT.....QKLFLEMIGNQVQSVKISCL 401

Scoring table: PAM 150
Gap 11

Searched: 91006 seqs, 28888923 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir51
1:ann1 2:ann2 3:ann3 4:ann4 5:unann1 6:unann2 7:unann3
8:unann4 9:unann5 10:unann6 11:unann7 12:unann8
13:unann9 14:unann10 15:unenc 16:unrev

Statistics: Mean 46.537; Variance 102.690; scale 0.453

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | % Query Match | Length | DB | ID | Description | Pred. No. |
|---|---|---|---|---|---|---|---|
| 1 | 398 | 13.1 | 461 | 6 | A35356 | tumor necrosis facto | 3.16e-47 |
| 2 | 377 | 12.4 | 459 | 14 | I48854 | gene murine tumour n | 1.46e-43 |
| 3 | 375 | 12.4 | 474 | 6 | B38634 | tumor necrosis facto | 3.24e-43 |
| 4 | 303 | 10.0 | 277 | 13 | A60771 | B-cell activation pr | 6.84e-31 |
| 5 | 294 | 9.7 | 289 | 14 | A46515 | B cell-associated su | 2.21e-29 |
| 6 | 294 | 9.7 | 305 | 14 | A46476 | CD40 - mouse | 2.21e-29 |
| 7 | 269 | 8.9 | 326 | 2 | GQVZML | T2 protein - myxoma | 3.14e-25 |
| 8 | 260 | 8.6 | 325 | 6 | B43692 | T2 protein - rabbit | 9.43e-24 |
| 9 | 260 | 8.6 | 435 | 13 | I54182 | tumor necrosis facto | 9.43e-24 |
| 10 | 233 | 7.7 | 349 | 8 | D36858 | G4R protein - variol | 2.20e-19 |
| 11 | 230 | 7.6 | 138 | 16 | S32385 | gene G4R protein - v | 6.62e-19 |
| 12 | 221 | 7.3 | 454 | 14 | I57826 | tumor necrosis facto | 1.77e-17 |
| 13 | 221 | 7.3 | 454 | 2 | GQMST1 | tumor necrosis facto | 1.77e-17 |
| 14 | 220 | 7.3 | 461 | 2 | GQRTT1 | tumor necrosis facto | 2.54e-17 |
| 15 | 215 | 7.1 | 416 | 6 | JN0006 | nerve growth factor | 1.55e-16 |
| 16 | 213 | 7.0 | 427 | 2 | GQHUN | nerve growth factor | 3.20e-16 |
| 17 | 207 | 6.8 | 425 | 6 | A26431 | nerve growth factor | 2.75e-15 |
| 18 | 186 | 6.1 | 461 | 14 | JC4302 | tumor necrosis facto | 4.49e-12 |
| 19 | 178 | 5.9 | 595 | 13 | A42086 | CD30 antigen precurs | 7.07e-11 |
| 20 | 172 | 5.7 | 455 | 2 | GQHUT1 | tumor necrosis facto | 5.44e-10 |
| 21 | 162 | 5.3 | 260 | 2 | A46517 | CD27 antigen precurs | 1.55e-08 |
| 22 | 159 | 5.2 | 256 | 14 | B32393 | T-cell antigen 4-1BB | 4.17e-08 |
| 23 | 154 | 5.1 | 324 | 14 | JC2395 | Fas antigen - rat | 2.14e-07 |
| 24 | 146 | 4.8 | 271 | 14 | S12783 | OX40 antigen precurs | 2.81e-06 |
| 25 | 144 | 4.8 | 272 | 14 | I48700 | gene ox40 protein - | 5.31e-06 |
| 26 | 141 | 4.7 | 255 | 13 | JT0752 | lymphocyte activatio | 1.37e-05 |
| 27 | 140 | 4.6 | 335 | 13 | A38142 | APO-1 antigen, Fas a | 1.87e-05 |
| 28 | 137 | 4.5 | 327 | 14 | A46484 | apoptosis-mediating | 4.76e-05 |
| 29 | 134 | 4.4 | 250 | 2 | A49053 | CD27 antigen precurs | 1.20e-04 |
| 30 | 134 | 4.4 | 314 | 13 | I37383 | FAS soluble protein | 1.20e-04 |
| 31 | 134 | 4.4 | 335 | 13 | A40036 | apoptosis-mediating | 1.20e-04 |
| 32 | 124 | 4.1 | 103 | 8 | JQ1791 | SalF16R protein - va | 2.44e-03 |
| 33 | 124 | 4.1 | 103 | 8 | A42523 | A53R protein - vacci | 2.44e-03 |
| 34 | 115 | 3.8 | 360 | 11 | S48365 | hypothetical protein | 3.30e-02 |
| 35 | 110 | 3.6 | 535 | 11 | B34576 | D2 protein precursor | 1.34e-01 |
| 36 | 105 | 3.5 | 2813 | 3 | VWHU | von Willebrand facto | 5.22e-01 |
| 37 | 103 | 3.4 | 344 | 11 | S61037 | hypothetical protein | 8.89e-01 |
| 38 | 104 | 3.4 | 614 | 12 | S43427 | intermediate filamen | 6.81e-01 |
| 39 | 102 | 3.4 | 3084 | 3 | MMMSA | laminin chain A prec | 1.16e+00 |
| 40 | 100 | 3.3 | 132 | 13 | S57566 | Fas/Apo-1/CD95 prote | 1.95e+00 |
| 41 | 100 | 3.3 | 149 | 13 | S58662 | Fas-Delta-(4,7) prot | 1.95e+00 |
| 42 | 101 | 3.3 | 713 | 11 | JC6012 | glutamine--fructose- | 1.50e+00 |
| 43 | 101 | 3.3 | 1122 | 12 | S64443 | probable membrane pr | 1.50e+00 |
| 44 | 100 | 3.3 | 2677 | 13 | A38194 | desmoplakin I - huma | 1.95e+00 |
| 45 | 98 | 3.2 | 1947 | 3 | S05697 | myosin heavy chain C | 3.26e+00 |

ALIGNMENTS

```
RESULT    1
ENTRY             A35356     #type complete
TITLE             tumor necrosis factor receptor type 2 precursor - human
ALTERNATE_NAMES   75K tumor necrosis factor receptor
ORGANISM          #formal_name Homo sapiens #common_name man
DATE              14-Sep-1990 #sequence_revision 14-Sep-1990 #text_change
                    22-Nov-1996
ACCESSIONS        A35356; A36475; A48416; A36007; A23666; B35010; I38094
REFERENCE         A35356
  #authors        Smith, C.A.; Davis, T.; Anderson, D.; Solam, L.; Beckmann,
                    M.P.; Jerzy, R.; Dower, S.K.; Cosman, D.; Goodwin, R.G.
  #journal        Science (1990) 248:1019-1023
  #title          A receptor for tumor necrosis factor defines an unusual
                    family of cellular and viral proteins.
  #cross-references MUID:90260639
  #accession      A35356
    ##status          preliminary
    ##molecule_type mRNA
    ##residues        1-461 ##label SMI
    ##cross-references GB:M32315
REFERENCE         A36475
  #authors        Kohno, T.; Brewer, M.T.; Baker, S.L.; Schwartz, P.E.; King,
                    M.W.; Hale, K.K.; Squires, C.H.; Thompson, R.C.; Vannice,
                    J.L.
  #journal        Proc. Natl. Acad. Sci. U.S.A. (1990) 87:8331-8335
  #title          A second tumor necrosis factor receptor gene product can shed
                    a naturally occurring tumor necrosis factor inhibitor.
  #cross-references MUID:91045991
  #accession      A36475
    ##status          preliminary
    ##molecule_type mRNA
    ##residues        1-195,'R',197-461 ##label KOH
    ##cross-references GB:M38549
REFERENCE         A48416
  #authors        Dembic, Z.; Loetscher, H.; Gubler, U.; Pan, Y.C.; Lahm, H.W.;
                    Gentz, R.; Brockhaus, M.; Lesslauer, W.
  #journal        Cytokine (1990) 2:231-237
  #title          Two human TNF receptors have similar extracellular, but
                    distinct intracellular, domain sequences.
  #cross-references MUID:91370690
  #accession      A48416
    ##status          preliminary
    ##molecule_type mRNA; protein
    ##residues        23-461 ##label DEM
    ##cross-references NCBIN:63368; NCBIP:63371
```

```
     ##note          sequence extracted from NCBI backbone
REFERENCE        A36007
   #authors      Heller, R.A.; Song, K.; Onasch, M.A.; Fischer, W.H.; Chang,
                   D.; Ringold, G.M.
   #journal      Proc. Natl. Acad. Sci. U.S.A. (1990) 87:6151-6155
   #title        Complementary DNA cloning of a receptor for tumor necrosis
                   factor and demonstration of a shed form of the receptor.
   #cross-references MUID:90349572
   #accession    A36007
      ##status        preliminary
      ##molecule_type mRNA
      ##residues      116-140,'P',142-195,'R',197-362,'T',364-461 ##label HEL
      ##cross-references GB:M35857
REFERENCE        A23666
   #authors      Loetscher, H.; Schlaeger, E.J.; Lahm, H.W.; Pan, Y.C.E.;
                   Lesslauer, W.; Brockhaus, M.
   #journal      J. Biol. Chem. (1990) 265:20131-20138
   #title        Purification and partial amino acid sequence analysis of two
                   distinct tumor necrosis factor receptors from HL60 cells.
   #cross-references MUID:91056048
   #accession    A23666
      ##status        preliminary
      ##molecule_type protein
      ##residues      23-40;65-69;136-141;300-306 ##label LOE
REFERENCE        A35010
   #authors      Engelmann, H.; Novick, D.; Wallach, D.
   #journal      J. Biol. Chem. (1990) 265:1531-1536
   #title        Two tumor necrosis factor-binding proteins purified from
                   human urine. Evidence for immunological cross-reactivity
                   with cell surface tumor necrosis factor receptors.
   #cross-references MUID:90110215
   #accession    B35010
      ##status        preliminary
      ##molecule_type protein
      ##residues      27-31 ##label ENG
REFERENCE        I38094
   #authors      Kuhnert, P.; Kemper, O.; Wallach, D.
   #journal      Gene (1994) 150:381-386
   #title        Cloning, sequencing and partial functional characterization
                   of the 5' region of the human p75 tumor necrosis factor
                   receptor-encoding gene (TNF-R).
   #cross-references MUID:95121934
   #accession    I38094
      ##status        preliminary; translated from GB/EMBL/DDBJ
      ##molecule_type DNA
      ##residues      1-37 ##label RES
      ##cross-references EMBL:X80021; NID:g666044; CDS_PID:g825701
GENETICS
   gene          GDB:TNFR2
      ##cross-references GDB:125914
   #map_position 1p36.2-1p36.2
   #introns      26/3
   #note         the list of introns is incomplete
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 2; NGF
                   receptor repeat homology
KEYWORDS         duplication; receptor; transmembrane protein
FEATURE
   1-22              #domain signal sequence #status predicted #label SIG\
   23-416            #product tumor necrosis factor receptor type 2 #status
                       experimental #label MAT\
   40-76             #domain NGF receptor repeat homology #label NG1\
   78-119            #domain NGF receptor repeat homology #label NG2\
   120-162           #domain NGF receptor repeat homology #label NG3\
   164-201           #domain NGF receptor repeat homology #label NG4\
   262-279           #domain transmembrane #status predicted #label TMN\
   280-461           #domain intracellular #status predicted #label INT\
   171,193           #binding_site carbohydrate (Asn) (covalent) #status
                       predicted
SUMMARY          #length 461  #molecular-weight 48291  #checksum 5724

  Query Match           13.1%;  Score 398;  DB 6;  Length 461;
  Best Local Similarity  43.8%;  Pred. No. 3.16e-47;
  Matches    63;  Conservative   19;  Mismatches  55;  Indels   7;  Gaps   6;

Db      45 yydqta-qmccskcspgqhakvfctktsdtvcdscedstytqlwnwvpeclscgsrcssd 103
           | ::|: |: | ||:||   |  ||    ||| :| |  ||: |:   ||| |:: |
Qy      31 YDEETSHQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKEL 90

Db     104 qvetqactreqnrictcrpgwycalskqegcrlcaplrkcrpgfgvarpgtetsdvvckp 163
           |   | | | :||:| |: |:|  |   | |  |    | | ||||| ::||   : |||
Qy      91 QYVKQECNRTHNRVCECKEGRY--LEI-EFC-L-KH-RSCPPGFGVVQAGTPERNTVCKR 144

Db     164 capgtfsnttsstdicrphqicnv 187
           |: | ||| |||   || |  |:|
Qy     145 CPDGFFSNETSSKAPCRKHTNCSV 168


RESULT    2
ENTRY            I48854     #type fragment
TITLE            gene murine tumour necrosis factor receptor 2 protein - mouse
                   (fragment)
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
                   02-Jul-1996
ACCESSIONS       I48854
REFERENCE        I48854
   #authors      Powell, E.E.; Wicker, L.S.; Peterson, L.B.; Todd, J.A.
   #journal      Mamm. Genome (1994) 5:726-727
   #title        Allelic variation of the type 2 tumor necrosis factor
                   receptor gene.
   #cross-references MUID:95178848
   #accession    I48854
      ##status        preliminary; translated from GB/EMBL/DDBJ
      ##molecule_type mRNA
      ##residues      1-459 ##label RES
      ##cross-references EMBL:X76401; NID:g433830; CDS_PID:g433831
GENETICS
   #note         gene name murine tumour necrosis factor receptor 2
SUMMARY          #length 459  #checksum 3156

  Query Match           12.4%;  Score 377;  DB 14;  Length 459;
  Best Local Similarity  41.5%;  Pred. No. 1.46e-43;
  Matches    66;  Conservative   21;  Mismatches  61;  Indels  11;  Gaps   7;

Db      37 qmccakcppgqyvkhfcnktsdtvcadceasmytqvwnqfrtclscsssscstdqvetrac 96
           |: | ||||| |:|: |     |||| |    ||: |:    || ||: |   |   : |
Qy      38 QLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQEC 97

Db      97 tkqqnrvcaceagrycalkthsgscrqcmrlskcgpgfgvassrapngnvlckacapgtf 156
            : :|||| |  |||  |      |   | | | |||||  : :|: | :|| |: | |
Qy      98 NRTHNRVCECKEGRY--LEIEF--CLKH-R-S-CPPGFGVVQAGTPERNTVCKRCPDGFF 150

Db     157 sdttsstdvcrphricsi--laip--gnastdavcapes 191
           |: |||   || |  ||:  | :   |||: | :|: :|
Qy     151 SNETSSKAPCRKHTNCSVFGLLLTQKGNATHDNICSGNS 189


RESULT    3
ENTRY            B38634     #type complete
TITLE            tumor necrosis factor receptor type 2 precursor - mouse
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
                   18-Oct-1996
ACCESSIONS       B38634; A40254; S54816
REFERENCE        A38634
   #authors      Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice,
                   G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D.V.
   #journal      Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834
   #title        Cloning and expression of cDNAs for two distinct murine tumor
                   necrosis factor receptors demonstrate one receptor is
                   species specific.
   #cross-references MUID:91187885
   #accession    B38634
      ##molecule_type mRNA
      ##residues      1-474 ##label LEW
      ##cross-references GB:M60469
```

```
REFERENCE        A40254
   #authors      Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brannan,
                   C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A.
   #journal      Mol. Cell. Biol. (1991) 11:3020-3026
   #title        Molecular cloning and expression of the type 1 and type 2
                   murine receptors for tumor necrosis factor.
   #cross-references MUID:91246168
   #accession    A40254
      ##molecule_type mRNA
      ##residues      1-474 ##label GOO
      ##cross-references GB:M60469
REFERENCE        S54816
   #authors      Kissonerghis, M.; Fellowes, R.; Feldmann, M.; Chernajovsky,
                   Y.
   #submission   submitted to the EMBL Data Library, May 1995
   #description  Characterization of the promoter region of the murine p75-TNF
                   receptor.
   #accession    S54816
      ##status        preliminary
      ##molecule_type DNA
      ##residues      1-22 ##label KIS
      ##cross-references EMBL:X87128
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 2; NGF
                   receptor repeat homology
FEATURE
   1-22              #domain signal sequence #status predicted #label SIG\
   23-474            #product tumor necrosis factor receptor type 2 #status
                       predicted #label MAT\
   40-77             #domain NGF receptor repeat homology #label NG1\
   79-120            #domain NGF receptor repeat homology #label NG2\
   166-203           #domain NGF receptor repeat homology #label NG4
SUMMARY          #length 474  #molecular-weight 50319  #checksum 7767

  Query Match           12.4%;  Score 375;  DB 6;  Length 474;
  Best Local Similarity  41.5%;  Pred. No. 3.24e-43;
  Matches    66;  Conservative   21;  Mismatches  61;  Indels  11;  Gaps   7;

Db      52 qmccakcppgqyvkhfcnktsdtvcadceasmytqvwnqfrtclscsssscttdqveirac 111
           |: | ||||| |:|: |     |||| |    ||: |:    || ||: |   | . : |
Qy      38 QLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQEC 97

Db     112 tkqqnrvcaceagrycalkthsgscrqcmrlskcgpgfgvassrapngnvlckacapgtf 171
            : :|||| |  ||| |      |    | | | |||||  : :|: | :|| |: | |
Qy      98 NRTHNRVCECKEGRY--LEIEF--CLKH-R-S-CPPGFGVVQAGTPERNTVCKRCPDGFF 150

Db     172 sdttsstdvcrphricsi--laip--gnastdavcapes 206
           |: |||   || |  ||:  | :   |||: | :|: :|
       151 SNETSSKAPCRKHTNCSVFGLLLTQKGNATHDNICSGNS 189


RESULT    4
ENTRY            A60771     #type complete
TITLE            B-cell activation protein CD40 precursor - human
ALTERNATE_NAMES  B-cell surface antigen Bp50
ORGANISM         #formal_name Homo sapiens #common_name man
DATE             03-Jun-1993 #sequence_revision 03-Feb-1994 #text_change
                   06-Sep-1996
ACCESSIONS       S04460; A60771
REFERENCE        S04460
   #authors      Stamenkovic, I.; Clark, E.A.; Seed, B.
   #journal      EMBO J. (1989) 8:1403-1410
   #title        A B-lymphocyte activation molecule related to the nerve
                   growth factor receptor and induced by cytokines in
                   carcinomas.
   #cross-references MUID:89356608
   #accession    S04460
      ##molecule_type mRNA
      ##residues      1-277 ##label STA
      ##cross-references EMBL:X60592
REFERENCE        A60771
   #authors      Braesch-Andersen, S.; Paulie, S.; Koho, H.; Nika, H.;
                   Aspenstroem, P.; Perlmann, P.
   #journal      J. Immunol. (1989) 142:562-567
   #title        Biochemical characteristics and partial amino acid sequence
                   of the receptor-like human B cell and carcinoma antigen
                   CDw40.
   #accession    A60771
      ##molecule_type protein
      ##residues      21-50 ##label BRA
      ##experimental_source Burkitt lymphoma cell line Raji
GENETICS
   #gene         GDB:CD40
      ##cross-references GDB:215268
   #map_position 20q12-20q13.2
KEYWORDS         B-cell; glycoprotein; phosphoprotein; transmembrane protein
FEATURE
   1-20              #domain signal sequence #status predicted #label SIG\
   21-277            #product B-cell activation protein CD40 #status
                       experimental #label MAT\
   21-193            #domain extracellular #status predicted #label EXT\
   194-215           #domain transmembrane #status predicted #label TMM\
   216-277           #domain intracellular #status predicted #label CYT\
   153,180           #binding_site carbohydrate (Asn) (covalent) #status
                       predicted
SUMMARY          #length 277  #molecular-weight 30619  #checksum 6261

  Query Match           10.0%;  Score 303;  DB 13;  Length 277;
  Best Local Similarity  36.8%;  Pred. No. 6.84e-31;
  Matches    56;  Conservative   21;  Mismatches  67;  Indels   8;  Gaps   7;

Db      38 cslcqpgqklvsdcteftetеclpcgesefldtwnrethchqhkycdpn-lglr-vqqkg 95
           |  | ||  |   ||    | | || :  : |:|:    |    || |    |: | |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-L--YCSPVCKELQYVKQEC 97

Db      96 tsetdtictceegwhctseacescvlhrscspgfgvkqiatgvsdticepcpvgffsnvs 155
              : :| | ||:    |  | |: ||||:||||| | :|   :|:|  || ||||| :
Qy      98 NRTHNRVCECKEGRY-L-EI-EFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     156 safekchpwtscetkdlvvqqagtnktdvvcg 187
           |:   |:  |:|    |:: | |    | :|:
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICS 186


RESULT    5
ENTRY            A46515     #type complete
TITLE            B cell-associated surface molecule CD40 - mouse
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             18-Jun-1993 #sequence_revision 18-Nov-1994 #text_change
                   03-Mar-1995
ACCESSIONS       A46515
REFERENCE        A46515
   #authors      Grimaldi, J.C.; Torres, R.; Kozak, C.A.; Chang, R.; Clark,
                   E.A.; Howard, M.; Cockayne, D.A.
   #journal      J. Immunol. (1992) 149:3921-3926
   #title        Genomic structure and chromosomal mapping of the murine CD40
                   gene.
   #cross-references MUID:93094586
   #accession    A46515
      ##status        preliminary; not compared with conceptual translation
      ##molecule_type nucleic acid
      ##residues      1-289 ##label GRI
      ##cross-references NCBIP:120357
      ##experimental_source BALB/c, liver
      ##note          sequence extracted from NCBI backbone
SUMMARY          #length 289  #molecular-weight 32111  #checksum 579

  Query Match            9.7%;  Score 294;  DB 14;  Length 289;
  Best Local Similarity  38.8%;  Pred. No. 2.21e-29;
  Matches    59;  Conservative   20;  Mismatches  65;  Indels   8;  Gaps   6;

Db      38 cdlcqpgsrltshctalektqchpcdsgefsaqwnreirchqhrhcepn-qglr-vkkeg 95
           || | ||: |  ||||  || | ||    ::  |:    |     | |    |: || |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-LY--CSPVCKELQYVKQEC 97

Db      96 taesdtvctckegqhctskdceacaqhtpcipgfgvmematettdtvchpcpvgffsnqs 155
              : || ||||:     : | |  | :| |||||:: :|   :|||  || |||||::
```

```
Qy      98 NRTHNRVCECKEGRY-L--EIEFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     156 slfekcypwtscedknlevlqkgtsqtnvicg 187
           |    |   |:|    | : ||| :  : ||:
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICS 186


RESULT    6
ENTRY             A46476     #type complete
TITLE             CD40 - mouse
ORGANISM          #formal_name Mus musculus #common_name house mouse
DATE              18-Jun-1993 #sequence_revision 18-Nov-1994 #text_change
                    18-Nov-1994
ACCESSIONS        A46476
REFERENCE         A46476
   #authors       Torres, R.M.; Clark, E.A.
   #journal       J. Immunol. (1992) 148:620-626
   #title         Differential increase of an alternatively polyadenylated mRNA
                    species of murine CD40 upon B lymphocyte activation.
   #cross-references MUID:92105763
   #accession     A46476
      ##status        preliminary
      ##molecule_type mRNA
      ##residues      1-305 ##label TOR
      ##cross-references NCBIN:75206; NCBIP:75207
      ##note          sequence extracted from NCBI backbone
SUMMARY           #length 305  #molecular-weight 33617  #checksum 5203

  Query Match             9.7%;  Score 294;  DB 14;  Length 305;
  Best Local Similarity  38.8%;  Pred. No. 2.21e-29;
  Matches    59;  Conservative   20;  Mismatches  65;  Indels   8;  Gaps   6;

Db      38 cdlcqpgsrltshctalektqchpcdsgefsaqwnreircheqhrhcepn-qglr-vkkeg 95
           || | ||: |  ||||  || | ||    ::  |:    |     | |    |: || |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-LY--CSPVCKELQYVKQEC 97

Db      96 taesdtvctckegqhctskdceacaqhtpcipgfgvmematettdtvchpcpvgffsnqs 155
           : || ||||:     : | |  | :| |||||:: :|   :|||  || ||||||::
Qy      98 NRTHNRVCECKEGRY-L--EIEFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     156 slfekcypwtscedknlevlqkgtsqtnvicg 187
           |    |   |:|    | : ||| :  : ||:
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICS 186


RESULT    7
ENTRY             GQVZML     #type complete
TITLE             T2 protein - myxoma virus (strain Lausanne)
ORGANISM          #formal_name myxoma virus
DATE              31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change
                    26-Apr-1996
ACCESSIONS        A40566
REFERENCE         A40566
   #authors       Upton, C.; Macen, J.L.; Schreiber, M.; Mcfadden, G.
   #journal       Virology (1991) 184:370-382
   #title         Myxoma virus expresses a secreted protein with homology to
                    the tumor necrosis factor receptor gene family that
                    contributes to viral virulence.
   #cross-references MUID:91335768
   #accession     A40566
      ##molecule_type DNA
      ##residues      1-326 ##label UPT
      ##cross-references GB:M37976
CLASSIFICATION    #superfamily myxoma virus T2 protein; NGF receptor repeat
                    homology
KEYWORDS          glycoprotein
FEATURE
   64-105             #domain NGF receptor repeat homology #label NG2\
   106-147            #domain NGF receptor repeat homology #label NG3\
   66,181,205,238     #binding_site carbohydrate (Asn) (covalent) #status
                        predicted
SUMMARY           #length 326  #molecular-weight 35208  #checksum 9255

  Query Match             8.9%;  Score 269;  DB 2;  Length 326;
  Best Local Similarity  33.8%;  Pred. No. 3.14e-25;
  Matches    47;  Conservative   25;  Mismatches  58;  Indels   9;  Gaps   8;

Db      40 ctscppgsyasrlcgpgsdtvcspcknetftastnhapacvscrgrctghlsesqscdkt 99
           |  ||||:|  : | :   |||:|| :  :| | : :  |: |   |       | |::|
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRT 100

Db     100 rdrvcdcsagnycllkgqegcricapktkcpagygvs-ghtrtgdvlctkcprytysdav 158
           ::|||:|  | |  |   | | :   :: ||:|:||  : |   : :| :||   :|:
Qy     101 HNRVCECKEGRY--LE-IEFC-L-KHRS-CPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     159 sstetctssfnyisvefnl 177
           ||   |   |  || | |
Qy     155 SSKAPCRKHTNC-SV-FGL 171


RESULT    8
ENTRY             B43692     #type complete
TITLE             T2 protein - rabbit fibroma virus
ORGANISM          #formal_name rabbit fibroma virus, Shope fibroma virus
DATE              30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
                    26-Apr-1996
ACCESSIONS        B43692
REFERENCE         A43692
   #authors       Upton, C.; DeLange, A.M.; McFadden, G.
   #journal       Virology (1987) 160:20-30
   #title         Tumorigenic poxviruses: genomic organization and DNA sequence
                    of the telomeric region of the Shope fibroma virus genome.
   #accession     B43692
      ##status        preliminary
      ##molecule_type DNA
      ##residues      1-325 ##label UPT
      ##cross-references GB:M17433
CLASSIFICATION    #superfamily NGF receptor repeat homology
FEATURE
   64-105             #domain NGF receptor repeat homology #label NG2\
   106-147            #domain NGF receptor repeat homology #label NG3
SUMMARY           #length 325  #molecular-weight 35132  #checksum 4629

  Query Match             8.6%;  Score 260;  DB 6;  Length 325;
  Best Local Similarity  30.5%;  Pred. No. 9.43e-24;
  Matches    51;  Conservative   31;  Mismatches  77;  Indels   8;  Gaps   5;

Db      40 caschpgfyasrlcgpgsntvcspcedgtftastnhapacvscrgpctghlsesqpcdrt 99
           |  | || |  : | :  :|||:|| |  :| | : :  |: |   |       | |:||
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRT 100

Db     100 hdrvcncstgnycllkgqngcricapqtkcpagygvs-ghtragdtlcekcpphtysdsl 158
           |:|||:|  | |  |  :    :|  :  ||:|:||  : |   :|:| :||   :|:
Qy     101 HNRVCECKEGRY--L--EIE--FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     159 sptercgtsfnyisvgfnlypvnetscttt-aghneviktkeftvtl 204
           |:   |    |    |: |    :::     :|::|      : |||
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICSGNSESTQKCGIDVTL 201


RESULT    9
ENTRY             I54182     #type complete
TITLE             tumor necrosis factor receptor 2-related protein - human
ORGANISM          #formal_name Homo sapiens #common_name man
DATE              24-May-1996 #sequence_revision 24-May-1996 #text_change
                    24-May-1996
ACCESSIONS        I54182
REFERENCE         I54182
   #authors       Baens, M.; Chaffanet, M.; Cassiman, J.J.; Van den Berghe, H.;
                    Marynen, P.
   #journal       Genomics (1993) 16:214-218
   #title         Construction and evaluation of a hncDNA library of human 12p
                    transcribed sequences derived from a somatic cell hybrid.
   #cross-references MUID:93252381
   #accession     I54182
      ##status        preliminary; translated from GB/EMBL/DDBJ
```

```
      ##molecule_type mRNA
      ##residues      1-435 ##label RES
      ##cross-references GB:L04270; NID:g339761; CDS_PID:g339762
SUMMARY          #length 435  #molecular-weight 46709  #checksum 63

  Query Match             8.6%;  Score 260;  DB 13;  Length 435;
  Best Local Similarity  32.3%;  Pred. No. 9.43e-24;
  Matches    52;  Conservative   23;  Mismatches  75;  Indels  11;  Gaps   6;

Db     52 epqhriccsrcppgtyvsakcsrirdtvcatcaensynehwnylticqlcrpcdpv-mgl 110
          |  |:: | :|||||:   |:  : |||| |::: | : |:    | |   | || : |
Qy     34 ETSHQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-LY--CSPVCKEL 90

Db    111 eeiap-ctskrktqcrcqpgmfcaawalecthcellsdcppgteaelkdevgkgnnhcvp 169
          : :   |   ::  | |  | :     ||   |     ||||    :       |  |
Qy     91 QYVKQECNRTHNRVCECKEGRY-----LEIEFCLKHRSCPPGFGV-VQAGTPERNTVCKR 144

Db    170 ckaghfqntsspsarcqphtrcenqglveaapgtaqsdttc 210
          |  | | | :|: | |: || |   ||: :  | | |  |
      145 CPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNATHDNIC 185


RESULT   10
ENTRY            D36858     #type complete
TITLE            G4R protein - variola virus
ALTERNATE_NAMES  B28R protein (COP)
ORGANISM         #formal_name variola virus
DATE             30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
                   15-Nov-1996
ACCESSIONS       D36858; S46888; S35987
REFERENCE        A36859
   #authors      Blinov, V.M.
   #submission   submitted to GenBank, November 1992
   #description  not shown.
   #accession    D36858
      ##status        preliminary
      ##molecule_type DNA
      ##residues      1-349 ##label BLI
      ##cross-references GB:X69198
      ##experimental_source strain India-1967, ssp. major, isolate Ind3
REFERENCE        S46868
   #authors      Kolykhalov, A.A.; Blinov, V.M.; Gytorov, V.V.; Pozdnyakov,
                   S.G.; Chizhikov, V.E.; Frolov, I.V.; Totmenin, A.V.;
                   Shchelkunov, S.N.; Sandakhchiev, L.S.
   #submission   submitted to the EMBL Data Library, April 1992
   #description  Nucleotide sequence analysis of the region of variola virus
                   XhoI F O H P Q genome fragment.
   #accession    S46888
      ##status        preliminary
      ##molecule_type DNA
      ##residues      1-349 ##label KOL
      ##cross-references EMBL:X67117
      ##experimental_source strain India-1967, isolate Ind3
CLASSIFICATION   #superfamily NGF receptor repeat homology
FEATURE
   68-109             #domain NGF receptor repeat homology #label NG2\
   110-151            #domain NGF receptor repeat homology #label NG3
SUMMARY          #length 349  #molecular-weight 38189  #checksum 2016

  Query Match             7.7%;  Score 233;  DB 8;  Length 349;
  Best Local Similarity  32.0%;  Pred. No. 2.20e-19;
  Matches    54;  Conservative   26;  Mismatches  79;  Indels  10;  Gaps   7;

Db      1 mksvlylyilflsciiingrdaapytppngkckdteykrhnlcclscppgtyasrlcdsk 60
          |: :|   ::||  | |:      : |      : |   | | |  ||||||  : | :|
Qy      1 MNKLLCCALVFLD-ISIKWTTQETFPPKYLHYDE-E-TSHQLLCDKCPPGTYLKQHCTAK 57

Db     61 tntqctpcgsgtftsrnnhlpaclscngrcnsnqvetrscntthnricecspgyycllkg 120
            :| |:||    :|   :    || |:  |:  |   : || ||||:|||  | |  |
Qy     58 WKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRY--LE- 114

Db    121 ssgckacvsqtkcgigygvs-ghtsvgdvicspcgfgtyshtvssadkc 168
                 |: :  |  |:||  : |:  : :|  |  | :|:  ||   |
```

```
Qy    115 -IE--FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPC 160


RESULT   11
ENTRY            S32385     #type fragment
TITLE            gene G4R protein - variola virus (fragment)
ORGANISM         #formal_name Variola virus
DATE             22-Nov-1993 #sequence_revision 22-Nov-1993 #text_change
                   22-Nov-1993
ACCESSIONS       S32385
REFERENCE        S32385
   #authors      Shchelkunov, S.N.; Blinov, V.M.; Sandakhchiev, L.S.
   #journal      FEBS Lett. (1993) 319:80-83
   #title        Genes of variola and vaccinia viruses necessary to overcome
                   the host protective mechanisms.
   #accession    S32385
      ##status        preliminary
      ##residues      1-138 ##label SHC
      ##cross-references EMBL:X69198
SUMMARY          #length 138  #checksum 6036

  Query Match             7.6%;  Score 230;  DB 16;  Length 138;
  Best Local Similarity  35.4%;  Pred. No. 6.62e-19;
  Matches    46;  Conservative   19;  Mismatches  58;  Indels   7;  Gaps   4;

Db     10 hnlcclscppgtyasrlcdsktntqctpcgsgtftsrnnhlpaclscngrcnsnqvetrs 69
          | | |  ||||||  : | :| :| |:||    :|   :    || |:  |:  |   :
Qy     37 HQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQE 96

Db     70 cntthnricecspgyycllkgssgckacvsqtkcgigygvs-ghtsvgdvicspcgfgty 128
          || ||||:|||  | |  |          |: :  |  |:||  : |:  : :|  |  | :
Qy     97 CNRTHNRVCECKEGRY--LE--IE--FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFF 150

Db    129 shtvssadkc 138
          |:  ||   |
Qy    151 SNETSSKAPC 160


RESULT   12
ENTRY            I57826     #type complete
TITLE            tumor necrosis factor receptor - mouse
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change
                   02-Aug-1996
ACCESSIONS       I57826
REFERENCE        I57826
   #authors      Rothe, J.G.; Bluethmann, H.; Gentz, R.; Lesslauer, W.;
                   Steinmetz, M.
   #journal      Mol. Immunol. (1993) 30:165-176
   #title        Genomic organization and promoter function of the murine
                   tumor necrosis factor receptor beta gene.
   #cross-references MUID:93156721
   #accession    I57826
      ##status        preliminary; translated from GB/EMBL/DDBJ
      ##molecule_type DNA
      ##residues      1-454 ##label RES
      ##cross-references GB:M76656; NID:g202100; CDS_PID:g202102
GENETICS
   #introns      13/3; 65/1; 108/1; 158/1; 184/2; 210/1; 248/1; 257/3; 353/1
   #note         gene name TNFR-2
SUMMARY          #length 454  #molecular-weight 50030  #checksum 4267

  Query Match             7.3%;  Score 221;  DB 14;  Length 454;
  Best Local Similarity  33.1%;  Pred. No. 1.77e-17;
  Matches    48;  Conservative   21;  Mismatches  65;  Indels  11;  Gaps   9;

Db     49 yvhsknnsicctkchkgtylvsdcpspgrdtvcrecekgtftasqnylrqclscktcrke 108
          |    :: : | ||  ||||   | :  : |||  |    :| | :   :|| |    ||
Qy     31 YDEETSHQLLCDKCPPGTYLKQHCTAK-WKTVCAPCPDHYYTDSWHTSDECLYCSPVCKE 89

Db    109 msqveispcqadkdtvcgckenqfqrylsethfqcvdcspcfng-tvtipcketqntvcn 167
          :  |    |    : || |||    ||| |  | |:   :|  |  |  :    :||||:
Qy     90 LQYVK-QECNRTHNRVCECKEG---RYL-EIEF-CLKHRSCPPGFGVVQAGTPERNTVCK 143
```

```
Db    168 -chagfflresecvpcshckkneec 191
          |  |||  |:   : : |:|: :|
Qy    144 RCPDGFFSNETSSKA-P-CRKHTNC 166


RESULT   13
ENTRY            GQMST1     #type complete
TITLE            tumor necrosis factor receptor type 1 precursor - mouse
ALTERNATE_NAMES  tumor necrosis factor receptor, 55K
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
                   18-Oct-1996
ACCESSIONS       A38634; B40254; S16677; S19021; I54532
REFERENCE        A38634
   #authors      Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice,
                   G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D.V.
   #journal      Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834
   #title        Cloning and expression of cDNAs for two distinct murine tumor
                   necrosis factor receptors demonstrate one receptor is
                   species specific.
   #cross-references MUID:91187885
   #accession    A38634
      ##molecule_type mRNA
      ##residues      1-454 ##label LEW
      ##cross-references GB:M60468
REFERENCE        A40254
   #authors      Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brannan,
                   C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A.
   #journal      Mol. Cell. Biol. (1991) 11:3020-3026
   #title        Molecular cloning and expression of the type 1 and type 2
                   murine receptors for tumor necrosis factor.
   #cross-references MUID:91246168
   #accession    B40254
      ##molecule_type mRNA
      ##residues      1-454 ##label GO2
      ##cross-references GB:M60468
REFERENCE        S16677
   #authors      Barrett, K.; Taylor-Fishwick, D.A.; Cope, A.P.; Kissonerghis,
                   A.M.; Gray, P.W.; Feldmann, M.; Foxwell, B.M.J.
   #journal      Eur. J. Immunol. (1991) 21:1649-1656
   #title        Cloning, expression and cross-linking analysis of the murine
                   p55 tumor necrosis factor receptor.
   #cross-references MUID:91285014
   #accession    S16677
      ##molecule_type mRNA
      ##residues      1-454 ##label BAR
      ##cross-references EMBL:X59238
    RENCE        S19021
   authors       Rothe, J.G.; Brockhaus, M.; Gentz, R.; Lesslauer, W.
   #journal      Immunogenetics (1991) 34:338-340
   #title        Molecular cloning and expression of the mouse Tnf receptor
                   type b.
   #cross-references MUID:92039815
   #accession    S19021
      ##molecule_type mRNA
      ##residues      1-454 ##label ROT
      ##cross-references EMBL:X57796
REFERENCE        I54532
   #authors      Bebo, B.F.
   #journal      Immunogenetics (1994) 39:450-451
   #title        Nucleotide sequence of the TNF type I receptor from a mouse
                   endothelioma cell line.
   #cross-references MUID:94245292
   #accession    I54532
      ##status        translated from GB/EMBL/DDBJ
      ##molecule_type mRNA
      ##residues      1-454 ##label RES
      ##cross-references GB:L26349; NID:g430732; CDS_PID:g430733
COMMENT     This protein is one of two distantly related receptors for both
              TNF-alpha (cachectin) and TNF-beta (lymphotoxin).
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 1; NGF
                   receptor repeat homology
KEYWORDS         duplication; glycoprotein; receptor; transmembrane protein
FEATURE
   1-29               #domain signal sequence #status predicted #label SIG\
   30-454             #product tumor necrosis factor receptor type 1 #status
                        predicted #label MAT\
   30-212             #domain extracellular #status predicted #label EXT\
   44-82              #domain NGF receptor repeat homology #label NG1\
   84-126             #domain NGF receptor repeat homology #label NG2\
   127-167            #domain NGF receptor repeat homology #label NG3\
   168-204            #domain NGF receptor repeat homology #label NG4\
   213-235            #domain transmembrane #status predicted #label MEM\
   236-454            #domain intracellular #status predicted #label INT
SUMMARY          #length 454  #molecular-weight 50129  #checksum 4839

  Query Match             7.3%;  Score 221;  DB 2;  Length 454;
  Best Local Similarity  33.1%;  Pred. No. 1.77e-17;
  Matches    48;  Conservative   21;  Mismatches  65;  Indels  11;  Gaps   9;

Db     49 yvhsknnsicctkchkgtylvsdcpspgrdtvcrecekgtftasqnylrqclscktcrke 108
          |   :: : | ||  ||||   | :  : |||  |    :| | :   :|| |    ||
Qy     31 YDEETSHQLLCDKCPPGTYLKQHCTAK-WKTVCAPCPDHYYTDSWHTSDECLYCSPVCKE 89

Db    109 msqveispcqadkdtvcgckenqfqrylsethfqcvdcspcfng-tvtipcketqntvcn 167
          :  |    |    : || |||    ||| |  | |:   :|  |  |  :    :||||:
Qy     90 LQYVK-QECNRTHNRVCECKEG---RYL-EIEF-CLKHRSCPPGFGVVQAGTPERNTVCK 143

Db    168 -chagfflresecvpcshckkneec 191
           |  |||  |:   : : |:|: :|
Qy    144 RCPDGFFSNETSSKA-P-CRKHTNC 166


RESULT   14
ENTRY            GQRTT1     #type complete
TITLE            tumor necrosis factor receptor type 1 precursor - rat
CONTAINS         tumor necrosis factor binding protein 1 (TNF blocking factor)
ORGANISM         #formal_name Rattus norvegicus #common_name Norway rat
DATE             30-Jun-1992 #sequence_revision 07-Oct-1994 #text_change
                   05-Apr-1995
ACCESSIONS       B36555
REFERENCE        A36555
   #authors      Himmler, A.; Maurer-Fogy, I.; Kroenke, M.; Scheurich, P.;
                   Pfizenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.;
                   Stratowa, C.; Adolf, G.R.
   #journal      DNA Cell Biol. (1990) 9:705-715
   #title        Molecular cloning and expression of human and rat tumor
                   necrosis factor receptor chain (p60) and its soluble
                   derivative, tumor necrosis factor-binding protein.
   #cross-references MUID:91090841
   #accession    B36555
      ##molecule_type mRNA
      ##residues      1-461 ##label HIM
      ##cross-references GB:M63122
COMMENT     This protein is one of two known receptors for both TNF-alpha
              (cachectin) and TNF-beta (lymphotoxin).
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 1; NGF
                   receptor repeat homology
KEYWORDS         duplication; glycoprotein; receptor; transmembrane protein
FEATURE
   1-29               #domain signal sequence #status predicted #label SIG\
   30-461             #product tumor necrosis factor receptor type 1 #status
                        predicted #label MAT\
   30-211             #domain extracellular #status predicted #label EXT\
   30-201             #product tumor necrosis factor binding protein #status
                        predicted #label TBP\
   44-82              #domain NGF receptor repeat homology #label NG1\
   84-126             #domain NGF receptor repeat homology #label NG2\
   127-167            #domain NGF receptor repeat homology #label NG3\
   168-204            #domain NGF receptor repeat homology #label NG4\
   212-234            #domain transmembrane #status predicted #label MEM\
   235-461            #domain intracellular #status predicted #label INT\
   54,151,201         #binding_site carbohydrate (Asn) (covalent) #status
                        predicted
SUMMARY          #length 461  #molecular-weight 50969  #checksum 1617
```

```
  Query Match             7.3%;  Score 220;  DB 2;  Length 461;
  Best Local Similarity  33.8%;  Pred. No. 2.54e-17;
  Matches    49;  Conservative   22;  Mismatches  63;  Indels  11;  Gaps  10;

Db      49 yahpknnsicctkchkgtylvsdcpspgqetvcevcdkgtftasqnhvrqclscktcrke 108
           |    :: : | ||  ||||   | :    ||| |    :| | :   :|| |    ||
Qy      31 YDEETSHQLLCDKCPPGTYLKQHCTAK-WKTVCAPCPDHYYTDSWHTSDECLYCSPVCKE 89

Db     109 mfqveispckadmdtvcgckknqfqrylsethfqcvdcspcfng-tvtipckekqntvcn 167
           : |     |:   : || ||  :  ||| |  | |:   :|  |  |  :    :||||:
Qy      90 L-QYVKQECNRTHNRVCECK--E-GRYL-EIEF-CLKHRSCPPGFGVVQAGTPERNTVCK 143

Db     168 -chagfflsgnectpcshckknqec 191
            |  ||| | || :: : |:|: :|
Qy     144 RCPDGFF-S-NETSSKAPCRKHTNC 166


RESULT  15
   ENTRY            JN0006     #type complete
   TITLE            nerve growth factor receptor, low affinity - chicken
ALTERNATE_NAMES     NGF receptor
ORGANISM            #formal_name Gallus gallus #common_name chicken
DATE                07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change
                      05-Apr-1995
ACCESSIONS          JN0006; A60504
REFERENCE           JN0006
   #authors         Large, T.H.; Weskamp, G.; Helder, J.C.; Radeke, M.J.; Misko,
                      T.P.; Shooter, E.M.; Reichardt, L.F.
   #journal         Neuron (1989) 2:1123-1134
   #title           Structure and developmental expression of the nerve growth
                      factor receptor in the chicken central nervous system.
   #cross-references MUID:90166579
   #accession       JN0006
      ##molecule_type mRNA
      ##residues       1-416 ##label LAR
      ##experimental_source embryonic chick brain
REFERENCE           A60504
   #authors         Heuer, J.G.; Fatemie-Nainie, S.; Wheeler, E.F.; Bothwell, M.
   #journal         Dev. Biol. (1990) 137:287-304
   #title           Structure and developmental expression of the chicken NGF
                      receptor.
   #accession       A60504
      ##status         preliminary; not compared with conceptual translation
      ##molecule_type mRNA
      ##residues       21-35,'Y',37-172,'K',174-275,'S',277-395,'R',397-416
                        ##label HEU
   COMMENT       This receptor is found on sensory and sympathetic neurons, on
                   neuroblastoma cells, and on a variety of nonneuronal derivatives
                   of the neural crest.
COMMENT          The cysteine-rich region of the extracellular domain may form part
                   or all of the NGF-binding site.
COMMENT          This protein is thought to form a high-affinity receptor when it
                   associates with the 140K trk proto-oncogene, which contains an
                   intracellular tyrosine kinase domain.
CLASSIFICATION      #superfamily nerve growth factor receptor; NGF receptor
                      repeat homology
KEYWORDS            duplication; glycoprotein; heterodimer; monomer;
                      phosphoprotein; receptor; transmembrane protein
FEATURE
   1-20                 #domain signal sequence #status predicted #label SIG\
   21-416               #product nerve growth factor receptor #status predicted
                          #label MAT\
   21-239               #domain extracellular #status predicted #label EXT\
   21-182               #region cysteine-rich\
   24-57                #domain NGF receptor repeat homology #label NG1\
   59-100               #domain NGF receptor repeat homology #label NG2\
   101-139              #domain NGF receptor repeat homology #label NG3\
   141-181              #domain NGF receptor repeat homology #label NG4\
   189-237              #region serine/threonine-rich\
   240-261              #domain transmembrane #status predicted #label MEM\
   262-416              #domain intracellular #status predicted #label INT\
   52                   #binding_site carbohydrate (Asn) (covalent) #status
                          predicted
SUMMARY             #length 416  #molecular-weight 44654  #checksum 3542

  Query Match             7.1%;  Score 215;  DB 6;  Length 416;
  Best Local Similarity  30.4%;  Pred. No. 1.55e-16;
  Matches    45;  Conservative   27;  Mismatches  70;  Indels   6;  Gaps   6;

Db      36 ckacnlgegvvqpcgvn-qtvcepcldsvtysdtvsatepckpctq-cvglhsmsapcve 93
           |  |  |  : | |  :  ||| || |   |:|:  ::: |  |:  |  |: :   |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHY-YTDSWHTSDECLYCSPVCKELQYVKQECNR 99

Db      94 sddavcrcaygyfqdelsgsckecsicevgfglmfpcrdsqdtvceecpegtfsdeanfv 153
           : : || |  | :  |:   |     |  ||| :: :    ::||| ||:| ||:|::
Qy     100 THNRVCECKEGRYL-EIE-FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSK 157

Db     154 dpclpcticeenevmvke-ctatsdaec 180
            ||   | |    ::: :   || |  |
Qy     158 APCRKHTNCSVFGLLLTQKGNATHDNIC 185


Search completed: Wed Aug 20 09:43:54 1997
Job time : 99 secs.
```